

07/29/2002

Serial No.:09/812,647

FILE 'REGISTRY' ENTERED AT 16:09:40 ON 29 JUL 2002
L1 STRUCTURE UPLOADED
L2 2 S L1 SSS SAM
L3 7 S L1 SSS FULL

FILE 'HCAPLUS' ENTERED AT 16:11:45 ON 29 JUL 2002
L4 199 S L3
L5 0 S L4 AND DIPOLE ROTOR
L6 3 S L4 AND DIPOLE MOMENT
L7 0 S L4 AND (TWO OR 2) (2N) (D OR DIMENSION?)
L8 1 S L4 AND ROTOR
L9 0 S L8 NOT L6
L10 2 S L4 AND DIELECTRIC
L11 2 S L10 NOT L6
L12 1 S L4 AND EXCITAT###
L13 1 S L12 NOT (L6 OR L10)
L14 1 S L4 AND (ELECTRIC? OR MECHANICAL OR MAGNETIC) (2N) (FORCE)
L15 0 S L14 NOT (L6 OR L10)
L16 1 S L4 AND (ELECTRIC?) (2N) (CURRENT)
L17 0 S L16 NOT (L6 OR L10)
L18 0 S L4 AND MOLECULAR MOTOR
L19 0 S L4 AND MOLECULAR (2N)MOTOR

FILE 'REGISTRY' ENTERED AT 16:24:10 ON 29 JUL 2002
L20 STRUCTURE UPLOADED
L21 0 S L20 SSS SAM
L22 1 S L20 SSS FULL

FILE 'HCAPLUS' ENTERED AT 16:25:09 ON 29 JUL 2002
L23 1 S L22
L24 0 S L23 NOT (L6 OR L10)

FILE 'REGISTRY' ENTERED AT 16:26:05 ON 29 JUL 2002
L25 STRUCTURE UPLOADED

FILE 'HCAPLUS' ENTERED AT 16:26:38 ON 29 JUL 2002
S L25

FILE 'REGISTRY' ENTERED AT 16:26:49 ON 29 JUL 2002
L26 0 S L25 SSS SAM

FILE 'HCAPLUS' ENTERED AT 16:26:50 ON 29 JUL 2002
L27 0 S L26 SSS SAM
S L25

FILE 'REGISTRY' ENTERED AT 16:27:07 ON 29 JUL 2002
L28 1 S L25 SSS FULL

FILE 'HCAPLUS' ENTERED AT 16:27:08 ON 29 JUL 2002
L29 1 S L28 SSS FULL
L30 0 S L29 NOT (L6 OR L10)

FILE 'REGISTRY' ENTERED AT 16:30:55 ON 29 JUL 2002
L31 STRUCTURE UPLOADED
L32 50 S L31 SSS SAM
L33 1668 S L31 SSS FULL
L34 STRUCTURE UPLOADED
L35 0 S L34 SSS SAM

07/29/2002

Serial No.:09/812,647

L36 1 S L34 SSS FULL
L37 STRUCTURE UPLOADED
L38 0 S L37 SSS SAM
L39 20 S L37 SSS FULL

FILE 'HCAPLUS' ENTERED AT 16:33:51 ON 29 JUL 2002

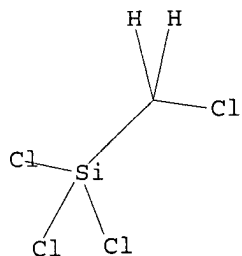
L40 2180 S L33
L41 0 S L40 AND DIPOLE ROTOR
L42 0 S L40 AND MOLECULAR MOTOR
L43 17 S L40 AND DIPOLE MOMENT
L44 14 S L43 NOT (L6 OR L10)
L45 12 S L40 AND COVALENT?
L46 12 S L45 NOT (L6 OR L10 OR L43)
L47 1 S L40 AND ELECTRIC CURRENT
L48 6 S L40 AND ELECTRIC FIELD
L49 5 S (L47 OR L48) NOT (L6 OR L10 OR L43 OR L45)
L50 1 S L40 AND MOTOR
L51 1 S L40 AND DIPOLAR ROTOR
L52 1 S L4 AND DIPOLAR ROTOR
L53 50 S L39
L54 49 S L53 NOT (L6 OR L10 OR L43 OR L45 OR L47 OR L48)
L55 0 S L54 AND DIPOLAR ROTOR
L56 0 S L54 AND MOLECULAR ROTOR
L57 0 S L54 AND DIPOLE MOMENT
L58 0 S L54 AND COVALENT?
L59 0 S L54 AND MOTOR
L60 3 S L54 AND METAL
L61 0 S L40 AND ROTOR ROTATE

07/29/2002

Serial No.:09/812,647

FILE 'REGISTRY' ENTERED AT 16:09:40 ON 29 JUL 2002
L1 STRUCTURE UPLOADED

=> D L1
L1 HAS NO ANSWERS
L1 STR



07/29/2002

Serial No.:09/812,647

L6 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:781394 HCAPLUS

DN 135:318587

TI Molecular dipolar rotors useful in molecular electronics

IN Michl, Josef; Price, John C.; Magnera, Thomas F.

PA USA

SO U.S. Pat. Appl. Publ., 24 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001033937	A1	20011025	US 2001-812647	20010320
PRAI	US 2000-190648P	P	20000320		
OS	MARPAT 135:318587				

AB Mol. dipolar rotors comprising a base, an axle connected to said base and oriented substantially perpendicular to said base, and a rotor portion having an elec. **dipole moment** are provided. Claimed mol. dipolar rotors include H₂CClSiCl₃, 2,3-(NC)2-5,6-(MeO)2C₆HCl.tplbond.CSiCl₃, H₂CClC.tplbond.CSiCl₃ and I (M = transition metal; Z = -HgSZ' (Z' = -(CH₂)_nSi(OR)₃; n = 0-15; R = alkyl optionally substituted); Y, Z independently = polar or charged group). The mol. dipolar rotors may be attached to a surface. Arrays of mol. dipolar rotors attached to surfaces are provided. Mol. dipolar rotors are useful in prepn. of small devices, e.g. for producing elec. current.

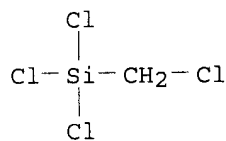
IT 1558-25-4D, Trichloro(chloromethyl)silane, surface-bound

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)

(as mol. dipolar rotor useful in mol. electronics)

RN 1558-25-4 HCAPLUS

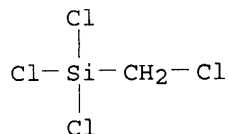
CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

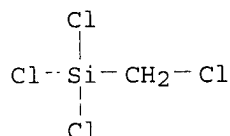
L6 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:167802 HCAPLUS
DN 90:167802
TI Organosilicon compounds. CLVIII. An intramolecular interaction between
halogen and silicon displayed in some physical properties of silylmethyl
halides
AU Pola, Josef; Chvalovsky, Vaclav
CS Inst. Chem. Process Fundam., Czechoslovak Acad. Sci., Prague, Czech.
SO Collect. Czech. Chem. Commun. (1978), 43(12), 3192-201
CODEN: CCCCCAK; ISSN: 0366-547X
DT Journal
LA English
AB IR OH wave no. shifts of PhOH in CCl₄ resulting from H bond formation with
(EtO)_nMe_{3-n}SiCH₂X (n = 1-3, X = halo) were correlated by the Taft equation
and σ^* CH₂X were evaluated. The results together with those from
dipole moment and ¹H NMR measurements confirm X-Si
interaction in silylmethyl halides.
IT **1558-25-4**
RL: PRP (Properties)
(NMR of)
RN 1558-25-4 HCAPLUS
CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

L6 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:104476 HCAPLUS
DN 88:104476
TI Organosilicon compounds. Part CLIV. An intramolecular interaction in
silylmethyl chlorides as seen from **dipole moment** and
spectral data
AU Pola, J.; Chvalovsky, V.
CS Inst. Chem. Process Fundam., Czech. Acad. Sci., Prague, Czech.
SO Collect. Czech. Chem. Commun. (1977), 42(12), 3581-90
CODEN: CCCCAC
DT Journal
LA English
AB The magnetic shielding of the CH₂ protons in R₃SiCH₂Cl (R = Me, H, Cl) is
correlated with the inductive effect of the R₃Si groups. The ³⁵Cl-NQR
frequencies are influenced by intramol. interaction (the .alpha.-effect),
and this interaction diminishes with increasing electron-withdrawing
ability of the substituents bonded to the Si atom. The importance of the
.alpha.-effect in silylmethyl chlorides is supported by the
proton-acceptor ability of the O in (EtO)₃-nMenSiCH₂Cl. The low
dipole moment of Cl₃SiCH₂Cl is consistent with mutual
interaction of Si-Cl and C-Cl bond moments.
IT 1558-25-4
RL: PRP (Properties)
(NMR of)
RN 1558-25-4 HCAPLUS
CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

L11 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:475894 HCAPLUS

DN 133:97966

TI **Dielectric** films from organohydridosiloxane resins

IN Hacker, Nigel P.; Lefferts, Scott; Slessor, Michael D.; Figge, Lisa K.

PA AlliedSignal, Inc., USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000041231	A1	20000713	WO 2000-US523	20000107
	W:				
	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6177199	B1	20010123	US 1999-227035	19990107
	US 6218020	B1	20010417	US 1999-227498	19990107
	EP 1149412	A1	20011031	EP 2000-903195	20000107
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6358559	B1	20020319	US 2000-609437	20000630
	US 6361820	B1	20020326	US 2000-609499	20000630
PRAI	US 1999-227035	A	19990107		
	US 1999-227498	A	19990107		
	WO 2000-US523	W	20000107		

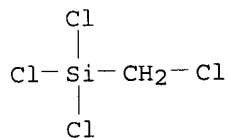
AB A method of making a **dielec.** film on a substrate from a compn. contg. an organohydridosiloxane resin is presented. The organohydridosiloxane resins have a cage conformation. The process of making a **dielec.** film includes forming a soln. of a solvent and the organohydridosiloxane resin, dispensing the soln. on a substrate, spinning the substrate, baking the substrate to remove the solvent, and curing the substrate to form the **dielec.** film. **Dielec** . films of the present invention exhibit **dielec.** consts. of .apprx.3.0 or lower.

IT 285995-41-7

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**dielec.** films from organohydridosiloxane resins)

RN 285995-41-7 HCAPLUS

CN Silane, trichloro(chloromethyl)-, polymer with trichlorosilane, hydrolytic (9CI) (CA INDEX NAME)



L11 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:709121 HCAPLUS

DN 129:316735

TI Organohydridosiloxane resins with high organic content, their manufacture and use in coating semiconductors

IN Hacker, Nigel P.; Lefferts, Scott; Figge, Lisa

PA AlliedSignal Inc., USA

SO PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9847944	A1	19981029	WO 1998-US6489	19980402
	W:	AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GH, HU, ID, IL, IS, JP, KP, KR, LK, LR, LS, LT, LV, MG, MK, MN, MW, MX, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	US 6143855	A	20001107	US 1998-44798	19980320
	AU 9867940	A1	19981113	AU 1998-67940	19980402
	EP 977797	A1	20000209	EP 1998-913372	19980402
	R:	DE, FR, GB, NL, IE			
	JP 2000510520	T2	20000815	JP 1998-546057	19980402
PRAI	US 1997-44481P	P	19970421		
	US 1998-44798	A	19980320		
	WO 1998-US6489	W	19980402		
AB	An organohydridosiloxane polymer has a cage conformation, .gtorsim.40 mol% C contg. substituents and a dielec. const. .ltorsim.2.7. Each Si atom of the cage polymer is bonded to .gtoreq.3 O atoms and to either a H atom or an org. substituent. By providing such a caged structure with essentially no hydroxyl or alkoxy substituents, either on the polymer backbone or at terminal Si atoms, essentially no chain lengthening polymn. can occur in soln. Organohydridosiloxane resins having a mol. wt. .apprx.400-200,000 amu were formed using a dual phase solvent system and either a solid phase or phase transfer catalyst to assist the hydrolytic condensation of hydridotrihalosilane with .gtoreq.1 organotrihalosilane. Trichlorosilane and methyltrichlorosilane were polymd. in hexane/EtOH/H2O in the presence of tetrabutylammonium chloride catalyst to give a product having mol. wt. 33,589. Solns. of the above organohydridosiloxane was spin coated onto silicone wafer and cured at 380.degree. to give a coating having dielec. const. (1 MHz) 2.43.				
IT	214966-70-8P , (Chloromethyl)trichlorosilane-methyltrichlorosilane-trichlorosilane-water copolymer				
	RL: IMF (Industrial manufacture); PREP (Preparation)				
	(stable solns. of silsesquioxane resins with caged structure, high org. content and low dielec. const. applied to silicone wafer)				
RN	214966-70-8 HCAPLUS				
CN	Silane, trichloro(chloromethyl)-, polymer with trichloromethylsilane and trichlorosilane, hydrolytic (9CI) (CA INDEX NAME)				

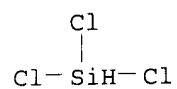
CM 1

CRN 10025-78-2

CMF Cl3 H Si

07/29/2002

Serial No.:09/812,647



CM 2

CRN 7732-18-5

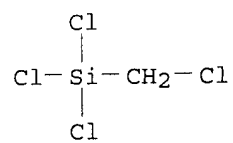
CMF H2 O

H₂O

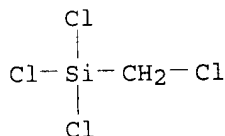
CM 3

CRN 1558-25-4

CMF C H2 Cl4 Si



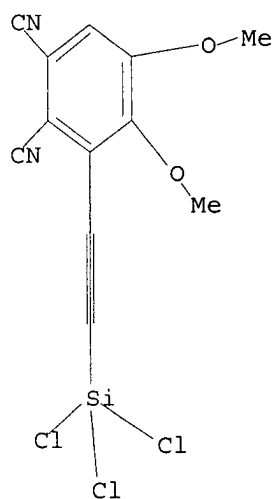
L13 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:521452 HCAPLUS
DN 127:176470
TI 29Si NMR chemical shifts and reactivity effects of the series
(CH₃)₃-nCl_nSiX. An ab initio study
AU Wolff, Renate; Jancke, Harald; Radeglia, Reiner
CS Federal Institute for Materials Research and Testing (BAM),
Berlin-Adlershof, D-12489, Germany
SO Main Group Chemistry (1997), 2(1), 17-30
CODEN: MGCHE7; ISSN: 1024-1221
PB Gordon & Breach
DT Journal
LA English
AB The 29Si NMR chem. shifts of the methylchlorosilanes, Me₃-nCl_nSiX (n =
0-3) with X = H, CH₃, C₂H₅, CH₂Cl, CHCl₂, NH₂, N(H)CH₃, NMe₂, OH, OCH₃,
OC₂H₅, OSiH₃, F, SiH₃, and Cl were calcd. using the IGLO (Individual Gauge
for Localized Orbitals) method. The theor. results are in good agreement
with available exptl. values. The partitioning of the theor. shielding
consts. into contributions from individual bonds, the lone pairs, and the
inner shells was used to discuss their resp. influences on the Si chem.
shifts. The correlation of the Si chem. shifts of the mentioned series
for different n were investigated. In some cases, this correlation shows
a distance sepn. between groups of substituents with and without lone
pairs. This effect is well verified by the theor. results. It can be
understood as a consequence of the mutual influences of the four .sigma.
bonds surrounding the Si atom and their contributions to the shielding of
the Si nucleus. The excited states are substantially involved in this
effect. The Si net charges do not contribute. Based on the phenomenol.
similarity with the behavior of Si chem. shifts, probably some
peculiarities of the reaction rates known from the synthesis of silicones
might be attributed to similar electronic influences. In particular,
apparently the four .sigma. bonds surrounding the Si reaction center play
a much more predominant role than p.pi.-d.pi. interactions and back
donation effects between the O lone pairs and the Si reaction center. For
describing the reactivities, the **excitation** energies have to be
taken into account.
IT 1558-25-4, Chloromethyltrichlorosilane
RL: PRP (Properties)
(silicon-29 NMR chem. shifts and reactivity effects of
methylchlorosilanes)
RN 1558-25-4 HCAPLUS
CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

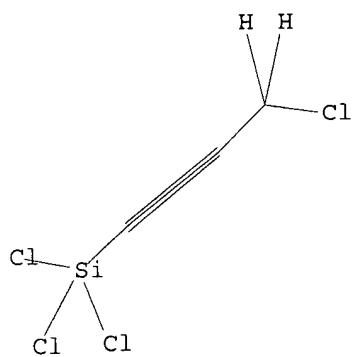
=> D L20
L20 HAS NO ANSWERS
L20 STR



07/29/2002

Serial No.:09/812,647

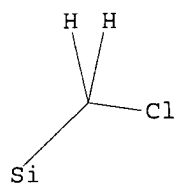
=> D L25
L25 HAS NO ANSWERS
L25 STR



07/29/2002

Serial No.:09/812,647

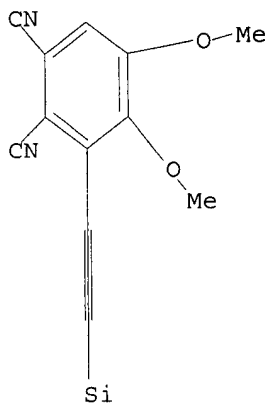
=> D L31
L31 HAS NO ANSWERS
L31 STR



07/29/2002

Serial No.:09/812,647

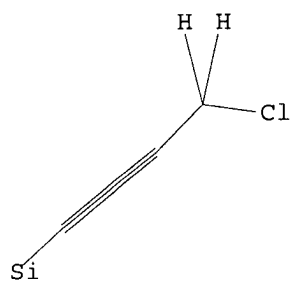
=> D L34
L34 HAS NO ANSWERS
L34 STR



07/29/2002

Serial No.:09/812,647

=> D L37
L37 HAS NO ANSWERS
L37 STR



3

L44 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:674838 HCAPLUS

DN 136:53790

TI Infrared and Raman spectra, ab initio calculations and conformational equilibria of chloromethyl methyl dichlorosilane

AU Klaeboe, P.; Richard, C. J.; Nielsen, C. J.; Powell, D. L.; Aleksa, V.;

Gruodis, A.; Guirgis, G. A.

CS Department of Chemistry, University of Oslo, Oslo, 0315, Norway

SO Journal of Molecular Structure (2001), 597(1-3), 137-155

CODEN: JMOSB4; ISSN: 0022-2860

PB Elsevier Science B.V.

DT Journal

LA English

AB Dichloro(chloromethyl)methylsilane ($\text{ClCH}_2\text{CH}_3\text{SiCl}_2$) was synthesized and the IR spectra of its vapor, and of the amorphous and cryst. states, cooled to the temp. of liq. N were recorded. Addnl. mid IR spectra of the compd., isolated in both Ar and N matrixes, were taken at 5 K. Raman spectra of the liq. were recorded in a capillary at various temps. between 298 and 223 K. The crystal was also studied in a capillary at 210 K and deposited onto a Cu finger cooled with liq. N. The compd. occurs as anti and gauche conformers in its vapor and liq. states. Approx. five Raman bands, some of them weak, present in the fluid phases vanished upon crystn. An addnl. eight IR bands disappeared or were reduced in intensity after crystn. Two band pairs in the Raman spectra were used to calc. the enthalpy difference between the conformers in the liq. phase giving a value: $\Delta H(\text{liq})(\text{anti-gauche})$ of $0.0(+-.0.4)$ kJ mol⁻¹. In the Ar and N matrixes, various small intensity variations in the IR bands were obsd. after annealing to approx. 36 K (Ar) or 32 K (N). The gauche bands generally increased and the anti bands decreased in intensity, suggesting that gauche has a lower energy in the matrixes. The conformational barrier is 8-10 kJ mol⁻¹. The optimized geometries, IR and Raman intensities, and scaled vibrational frequencies for the anti and gauche conformers were derived from ab initio calcns. at the RHF/6-311G* level. The derived conformational energy difference was 7.2 kJ mol⁻¹, gauche being the conformer of lowest energy. The calcd. **dipole moments** of the anti and gauche conformers were 4.2 and 2.0 D, resp. Correlation between the obsd. and calcd. wave nos. of both conformers revealed that gauche was present in the crystal, and assignments of the spectra were carried out.

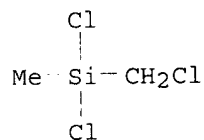
IT 1558-33-4

RL: PRP (Properties)

(IR and Raman spectra, ab initio calcns. and conformational equil. of)

RN 1558-33-4 HCAPLUS

CN Silane, dichloro(chloromethyl)methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L44 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:370378 HCAPLUS

DN 135:166862

TI Vibrational spectra, conformational equilibria and ab initio calculations of chloromethylmethyl dichlorosilane

AU Powell, D. L.; Klaeboe, P.; Nielsen, C. J.; Aleksa, V.; Gruodis, A.;

Richard, C. J.; Guirgis, G. A.; Durig, J. R.

CS Department of Chemistry, University of Oslo, Oslo, 0315, Norway

SO Journal of Molecular Structure (2001), 563-564, 523-528

CODEN: JMOSB4; ISSN: 0022-2860

PB Elsevier Science B.V.

DT Journal

LA English

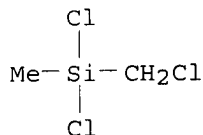
AB The IR spectra of chloromethylmethyl dichlorosilane ((ClCH₂)CH₃SiCl₂) were recorded in the vapor, amorphous and the cryst. solid phases in the range 4000-50 cm⁻¹. The middle IR spectra of the compd., isolated at 4.8 K in the Ar and the N₂ matrixes were also obsd. Raman spectra of the liq. were recorded at various temps. between 298 and 218 K in a capillary. The crystal was studied in a capillary at 210 K and addnl. spectra of the amorphous and annealed crystal, which was deposited on a Cu finger cooled with liq. N₂, were recorded. The spectra of chloromethylmethyl dichlorosilane showed that two conformers - anti and gauche - were present in the vapor and in the liq. Approx. five Raman and three IR bands, which were all weak, were present in the fluid phases: these vanished upon crystn. Three band pairs were used to calc. the enthalpy difference between the conformers in the liq. phase and this gave the av. following enthalpy difference: .DELTA.H(liq) (anti-gauche) of 0.2 +/- 0.3 kJ mol⁻¹ with gauche being slightly lower in energy. In the Ar and N₂ matrixes, small intensity variations in the IR bands were obsd. after annealing to .apprx.36 K (Ar) or 32 K (N₂). This implies that there is a low enthalpy difference between the conformers in the matrixes, again gauche has the lower energy. The optimized geometries, IR and Raman intensities, and scaled vibrational frequencies for the anti and gauche conformers were derived from ab initio calcns. using the Gaussian 94 program with a HF/6-311G* basis function. The derived conformational energy difference was 7.2 kJ mol⁻¹, gauche being the conformer of lowest energy. The anti and gauche conformers had calcd. **dipole moments** of 4.2 and 2.0 debye, resp. Correlation between the obsd. and calcd. wavenumbers of both conformers revealed that gauche was present in the crystal, and complete assignments of the spectra were carried out.

IT 1558-33-4P, Dichloro(chloromethyl)(methyl)silane

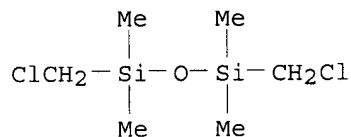
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn., vibrational spectra, conformational equil. and ab initio calcns. of)

RN 1558-33-4 HCAPLUS

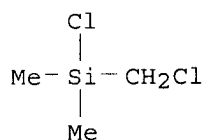
CN Silane, dichloro(chloromethyl)methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



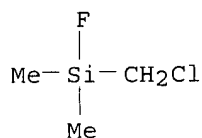
L44 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:475444 HCAPLUS
 DN 131:300003
 TI Synthesis and structure of .alpha., .omega. - Di(4 - (4' - methyl)substitute azobenzene)benzeneoxymethyl polymethylsiloxane
 AU Li, Liangxue; Zhang, Xianliang; Wang, Chengrui
 CS Department of Chemistry Hubei Jingzhou Teachers' College, Jingzhou, 434104, Peop. Rep. China
 SO Fenzi Kexue Xuebao (1999), 15(1), 45-48
 CODEN: JMOSE7; ISSN: 1000-9035
 PB Dongbei Shifan Daxue Xueshu Jikanshe
 DT Journal
 LA Chinese
 AB The prepn. of (CH₃ (C₆H₄) N₂ (C₆H₄) OCH₂Si(CH₃)₂)₂O) is discussed. The crystal structure of compd. is demonstrated by x-ray diffraction method, and the data of mol. **dipole moment** is obtained. The crystal is of monoclinic system and I2/A space group. The crystal cell parameters are found to be a = 2.173 83 nm, b = 0.803 25 nm, c = 2.088 85 nm, .beta. = 119. 191.degree., V = 3.128 62 nm³, Z = 4, Dc = 1.216 kg/m³. **Dipole moment** .mu. = 8.932.times.10⁻³⁰ C.cntdot.m. The relationship of the property and front mesomorphic group polymethylsiloxane composed of stiff and soft group is explained by anal. of its mol. structure and moment value.
 IT 2362-10-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in synthesis of .alpha., .omega. - Di(4 - (4' - methyl)substitute azobenzene)benzeneoxymethyl polymethylsiloxane)
 RN 2362-10-9 HCAPLUS
 CN Disiloxane, 1,3-bis(chloromethyl)-1,1,3,3-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



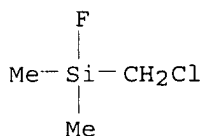
L44 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:408352 HCAPLUS
DN 113:8352
TI Catalytic behavior of interlayer-supported palladium(II) complexes on lithium hectorite
AU Shimazu, Shogo; Ishida, Tadashi; Uematsu, Takayoshi
CS Fac. Eng., Chiba Univ., Chiba, 260, Japan
SO J. Mol. Catal. (1989), 55(1-3), 353-60
CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English
AB The aminated Li hectorites HT-A1 (-OSiMe₂CH₂OCH₂CH₂NH₂) and HT-A2 (-OCH₂CH₂NH₂) were prep'd. by chem. modification of the OH group in Li hectorite (I). Interlayer-supported PdII complexes on I, Pd/HT-A1 and Pd/HT-A2, were synthesized by the reaction of [Pd(OAc)₂]₃ with HT-A1 and HT-A2, resp. X-ray diffraction studies showed that the basal spacings (d₀₀₁) of I and Pd/HT-A1 swollen with solvents varied with the **dipole moment** of the solvent. Catalytic activities and selectivities of Pd/HT-A1 for the hydrogenation of monoolefins and dienes were investigated in the liq.-solid heterogeneous system. The hydrogenation rate decreased in the order 1-pentene > 2-methyl-1-butene > cyclooctene. The selectivity for partial hydrogenation depended on the type of diene: conjugated dienes > unconjugated dienes. The selectivity for the partial hydrogenation of isoprene by Pd/HT-A1 was independent of the solvent, while that of the homogeneous catalyst [Pd(OAc)₂]₃ increased with increasing **dipole moment** of the solvent.
IT 1719-57-9D, Chloro(chloromethyl)dimethylsilane, reaction products with lithium hectorite and sodium aminoethanolate
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for hydrogenation of alkenes)
RN 1719-57-9 HCAPLUS
CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



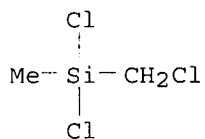
L44 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:621617 HCAPLUS
DN 109:221617
TI Relation of the electronic structure of chloroalkylchlorosilanes and
fluorosilanes to their gas chromatographic retention
AU Ermakov, A. I.; Zharikova, E. A.; Kirichenko, E. A.
CS Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Novomoskovsk, USSR
SO Zh. Fiz. Khim. (1988), 62(5), 1260-5
CODEN: ZFKHA9; ISSN: 0044-4537
DT Journal
LA Russian
AB Differences between the Kovats retention indexes (.DELTA.I) of the title
compds. on stationary phases of different polarity (DC 550, DC 200, XE 60)
are related to **dipole moments** of bonds (.mu.) and free
valences (VA0) of atoms in the analyte mols. Correlations of .DELTA.I
with functions involving free valences taking into account intraat.
interorbital interactions are better than those not taking into account
these interactions. Both the CH2Cl group Cl atom and the SiX groups (X =
Cl, F) contribute to the interactions with polar phases. The quantum
chem. calcns. were carried out by using a variant of the CNDO method.
IT 421-21-6 1558-33-4 1719-57-9 7274-82-0
RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. of, electronic structure effect on retention in)
RN 421-21-6 HCAPLUS
CN Silane, (chloromethyl)fluorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



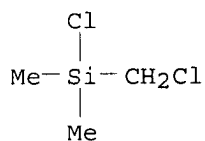
L44 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:621617 HCAPLUS
DN 109:221617
TI Relation of the electronic structure of chloroalkylchlorosilanes and
fluorosilanes to their gas chromatographic retention
AU Ermakov, A. I.; Zharikova, E. A.; Kirichenko, E. A.
CS Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Novomoskovsk, USSR
SO Zh. Fiz. Khim. (1988), 62(5), 1260-5
CODEN: ZFKHA9; ISSN: 0044-4537
DT Journal
LA Russian
AB Differences between the Kovats retention indexes (.DELTA.I) of the title
compds. on stationary phases of different polarity (DC 550, DC 200, XE 60)
are related to **dipole moments** of bonds (.mu.) and free
valences (VA0) of atoms in the analyte mols. Correlations of .DELTA.I
with functions involving free valences taking into account intraat.
interorbital interactions are better than those not taking into account
these interactions. Both the CH2Cl group Cl atom and the SiX groups (X =
Cl, F) contribute to the interactions with polar phases. The quantum
chem. calcns. were carried out by using a variant of the CNDO method.
IT 421-21-6 1558-33-4 1719-57-9 7274-82-0
RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. of, electronic structure effect on retention in)
RN 421-21-6 HCAPLUS
CN Silane, (chloromethyl)fluorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1558-33-4 HCAPLUS
CN Silane, dichloro(chloromethyl)methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1719-57-9 HCAPLUS
CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

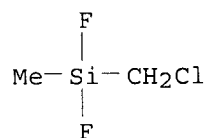


07/29/2002

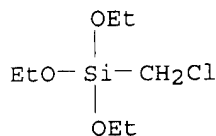
Serial No.:09/812,647

RN 7274-82-0 HCAPLUS

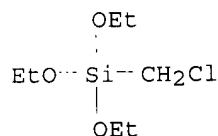
CN Silane, (chloromethyl)difluoromethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



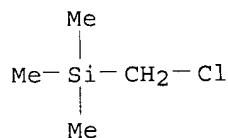
L44 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:120397 HCAPLUS
DN 94:120397
TI Nitrogen-containing organosilicon compounds. XCV. Study of the effect of structural changes in the frame on the silicon-nitrogen interaction in silatranes by the carbon-13, nitrogen-15, and silicon-29 NMR method
AU Liepins, E.; Birgele, I.; Solomennikova, I. I.; Lapsina, A.; Zelcans, G.; Lukevics, E.
CS Inst. Org. Sint., Riga, USSR
SO Zh. Obshch. Khim. (1980), 50(11), 2462-8
CODEN: ZOKHA4; ISSN: 0044-460X
DT Journal
LA Russian
AB ¹³C and ²⁹Si NMR data indicated that the N.fwdarw.Si interaction was stronger in silatranes I (R = Me, CH₂Cl, vinyl, Ph) than in I (R = H). ¹³C, ¹⁵N and ²⁹Si NMR data for silatranes II (R = Me, CH₂Cl, vinyl, Ph, 4-BrC₆H₄) and III (R = Me, Ph) indicated that enlargement of a ring or replacement of O by CH₂ weakened the N.fwdarw.Si bond. The ¹⁵N chem. shifts of II correlated linearly with Taft .sigma.* consts. and with calcd. **dipole moments** of the N.fwdarw.Si bond. A linear correlation was also found between changes in the ¹⁵N and ²⁹Si chem. shifts of II relative to acyclic model compds., indicating charge transfer from N to Si.
IT 15267-95-5
RL: PRP (Properties)
(NMR of carbon-13, nitrogen-15 and silicon-29 in)
RN 15267-95-5 HCAPLUS
CN Silane, (chloromethyl)triethoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



L44 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:47406 HCAPLUS
DN 94:47406
TI (Aroyloxymethyl)trifluorosilanes: a new class of pentacoordinate silicon compounds
AU Voronkov, M. G.; Frolov, Yu. L.; D'yakov, V. M.; Chipanina, N. N.; Gubanova, L. I.; Gavrilova, G. A.; Klyba, L. V.; Aksamentova, T. N.
CS Inst. Org. Chem., Irkutsk, 664033, USSR
SO J. Organomet. Chem. (1980), 201(1), 165-77
CODEN: JORCAI; ISSN: 0022-328X
DT Journal
LA English
AB The title compds. I (R = H, 4-Me, 4-F, 2-, 4-Cl, 4-Br, 4-MeO, 4-NO2) were prepd. by treating, $\text{RC}_6\text{H}_4\text{CO}_2\text{CH}_2\text{Si}(\text{OR}_1)_3$ ($\text{R}_1 = \text{Me}, \text{Et}$), with HF (79-88% yields) or SF_4 (93-98% yields). The presence of an intramol. coordinate $\text{F}_3\text{Si} \rightarrow \text{O} \rightarrow \text{C}$ bond is supported by x-ray diffraction, IR spectroscopy and **dipole moment** data. $\text{Si} \rightarrow \text{O}$ coordination in I remains intact in the gaseous and liq. states below 420 K as well as in soln. in most org. solvents. The dielec. const. of the medium significant affects the nature of the coordinate $\text{Si} \rightarrow \text{O}$ bond and that of the $\text{Si}-\text{F}$, $\text{C}=\text{O}$, $\text{C}-\text{O}-\text{C}$ bonds. In pyridine the intramol. coordinate $\text{Si} \rightarrow \text{O}$ interaction is disturbed or greatly weakened.
IT 15267-95-5
RL: RCT (Reactant)
(reaction of, with potassium chlorobenzoate)
RN 15267-95-5 HCAPLUS
CN Silane, (chloromethyl)triethoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



L44 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:110358 HCAPLUS
DN 92:110358
TI Synthesis and study of **dipole moments** of
.beta.-(n-alkyldimethylsilyl)propionic acids
AU Andreev, D. N.; Smirnova, G. S.; Burshtein, L. L.; Stepanova, T. P.;
Malinovskaya, V. P.
CS Inst. Vysokomol. Soedin., Leningrad, USSR
SO Izv. Akad. Nauk SSSR, Ser. Khim. (1979), (10), 2234-8
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
AB **Dipole moments** (.mu.) were detd. for RSiMe₂CH₂CH₂CO₂H
(I; R = C₁-6 n-alkyl) in the liq. state and in benzene. In benzene .mu.₂
was linearly correlated with the no. of C atoms in R (except for R = Me),
and .mu. was linearly correlated with .sigma.* of R. The latter
correlation yielded a .sigma.* value of .apprx.-0.19 for hexyl. In the
liq. state I existed in an assocd. form.
IT 2344-80-1 3121-75-3 3121-76-4
3121-77-5 73013-39-5 73013-40-8
RL: RCT (Reactant)
(reaction of, with Grignard reagent and sodium di-Et malonate)
RN 2344-80-1 HCAPLUS
CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L44 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 1977:163033 HCAPLUS

DN 86:163033

TI Intensities of infrared absorption bands and **dipole moments** of branched permethylsiloxanes and their derivatives

AU Voronkov, M. G.; Brodskaya, E. I.; Keiko, V. V.; Shevchenko, S. G.; Bazhenova, T. N.; Pavlov, S. F.; Modonov, V. B.; Dubinskaya, E. I.; Frolov, Yu. L.

CS Irkutsk. Inst. Org. Khim., Irkutsk, USSR

SO Dokl. Akad. Nauk SSSR (1977), 232(5), 1100-3 [Phys. Chem.]

CODEN: DANKAS

DT Journal

LA Russian

AB The integral intensities (A) of IR absorption bands of the .nu.as Si-O-Si and .delta. (Me)Si vibrations were measured and the **dipole moments** (.mu.) were detd. for branched permethylsiloxanes and their derivs. XSi(OA)3 (X = Et, Me(CH2)3, Cl(CH2)3, ClCH2, Cl2CH, Cl3C, CH2:CH, Ph; A = Me3Si), (Me3)nSi(OA)4-n (n = 0-3), A[OSi(OA)2]mOA (m = 2, 3, 4, 5, 10), and [O = Si(OA)2]4. The exptl. .mu. values were compared with the calcd. ones according to a vector additive scheme. In the calcns., all stable configurations with a tapered distribution of substituents at the Si-O fragment were considered. The calcd. .mu. values agreed with the exptl. ones with an error near the measurement error. The conformers are energy-equiv. and the population of the corresponding states is proportional to the degree of their degeneration. The changes in frequency and intensity of the .nu.as. Si-O-Si band, in dependence on the no. of Si-O(Si) groups, are discussed. The presence of 2 lines in the dependence $A_{1/2}(\text{SiOSi}) = f(\sigma_X)$ (σ_X = Taft const.) revealed that the character of the interaction of Si(OA)3 group with X was different; the X substituents (alkyl groups), the interaction of which with Si atom was of a purely induction character or was conditioned both by the induction and conjugation effects corresponded to 1 and the other lines, resp.

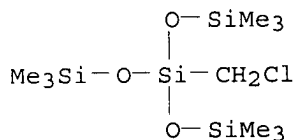
IT 41919-30-6

RL: PRP (Properties)

(**dipole moment** and IR spectrum of)

RN 41919-30-6 HCAPLUS

CN Trisiloxane, 3-(chloromethyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]- (9CI) (CA INDEX NAME)



L44 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 1975:606744 HCAPLUS

DN 83:206744

TI Configuration-dependent properties of poly(dimethylsilmethylene) chains. I. Experimental results

AU Ko, J. H.; Mark, J. E.

CS Macromol. Res. Cent., Univ. Michigan, Ann Arbor, Mich., USA

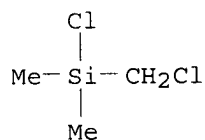
SO Macromolecules (1975), 8(6), 869-74

CODEN: MAMOBX

07/29/2002

Serial No.:09/812,647

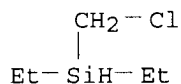
DT Journal
LA English
AB [-Si(Me)2CH2-]n (I) [25722-25-2] is a very compact chain, indicated by the insensitivity of its unperturbed dimensions and **dipole moments** to temp. I was prepd. by H2PtCl6 [16941-12-1]-catalyzed ring-opening polymn. of 1,1,3,3-tetramethyl-1,3-disilacyclobutane [1627-98-1], prepd. by Grignard cyclization of Me2Si(Cl)CH2Cl [1719-57-9]. Fractionated I was characterized by viscosity, osmotic pressure, and dielec. const. detns. at various temps. Stress-strain isotherms and thermoelastic (force-temp.) properties of crosslinked, unfractionated I were also detd.
IT 1719-57-9
RL: RCT (Reactant)
(Grignard cyclization of)
RN 1719-57-9 HCAPLUS
CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



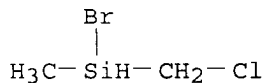
07/29/2002

Serial No.:09/812,647

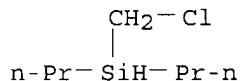
L44 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1973:514966 HCAPLUS
DN 79:114966
TI **Dipole moments** of the silicon-hydrogen bond in silicon
compounds
AU Egorochkin, A. N.; Vyazankin, N. S.; Voronkov, M. G.
CS Inst. Khim., Gorki, USSR
SO Dokl. Akad. Nauk SSSR (1973), 211(4), 859-61 [Chem]
CODEN: DANKAS
DT Journal
LA Russian
AB Bond moments of Si-H bonds and effective charges on the H atom were detd.
for 40 trisubstituted silanes; these values ranged from 1.59 D and -0.22,
resp., for Pr₃SiH to 0.75 D and -0.11 for (C₆F₅)₃-SiH.
IT **18157-29-4 23118-83-4 42805-31-2**
RL: PRP (Properties)
(**dipole moment** of silicon-hydrogen bond in)
RN 18157-29-4 HCAPLUS
CN Silane, (chloromethyl)diethyl- (8CI, 9CI) (CA INDEX NAME)



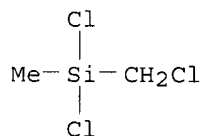
RN 23118-83-4 HCAPLUS
CN Silane, bromo(chloromethyl)methyl- (8CI, 9CI) (CA INDEX NAME)



RN 42805-31-2 HCAPLUS
CN Silane, (chloromethyl)dipropyl- (9CI) (CA INDEX NAME)



L44 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1972:456183 HCAPLUS
DN 77:56183
TI Retention indexes of alkyl- and arylchlorosilanes
AU Ainshtein, A. A.; Shulyat'eva, T. I.
CS USSR
SO Zh. Anal. Khim. (1972), 27(4), 816-21
CODEN: ZAKHA8
DT Journal
LA Russian
AB Retention indexes of a no. of alkyl-, alkylaryl-, aryl-, and chloroaryl
chlorosilanes and of some accompanying compds. were detd. on 2 stationary
phases: a polymethylsiloxane liq. PMS-20,000 and a fluorosiloxane liq.
FS-303. The dependence of the retention index values on the b.p. and the
relation between the difference of index values on the 2 stationary phases
and the **dipole moments** of the studied substances was
examd. The tabulated data and the graph of retention index values of the
analyzed substances on the 2 stationary phases can be used for
identification.
IT 1558-33-4
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
RN 1558-33-4 HCAPLUS
CN Silane, dichloro(chloromethyl)methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX
NAME)



07/29/2002

Serial No.:09/812,647

L44 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1970:476549 HCAPLUS
DN 73:76549
TI Electric **dipole moment** study of methylsilyl and
silylmethyl halides
AU Bellama, Jon M.; MacDiarmid, Alan G.
CS John Harrison Lab. of Chem., Univ. of Pennsylvania, Philadelphia, Pa., USA
SO J. Organometal. Chem. (1970), 24(1), 91-5
CODEN: JORCAI
DT Journal
LA English
AB The electric **dipole moments** of the isomeric monohalo
derivs. of methylsilane, $\text{SiH}_3\text{CH}_2\text{X}$ and MeSiH_2X were detd. in cyclohexane at
30.degree.. The magnitudes of the mol. **dipole moments**
and of the bond **dipole moments** are compared with those
of analogous compds., and interpreted, in part, in terms of intramol.
interactions between the halogen and the d orbitals of Si.
IT 10112-09-1
RL: PRP (Properties)
(**dipole moment** of)
RN 10112-09-1 HCAPLUS
CN Silane, (chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$\text{Cl}-\text{CH}_2-\text{SiH}_3$

L44 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 1968:82234 HCAPLUS

DN 68:82234

TI **Dipole moments** of some silylamines

AU Kokoreva, I. Yu.; Syrkin, Ya. K.; Babich, E. D.; Vdovin, V. M.

CS Mosk. Inst. Tonkoi Khim. Tekhnol. im. Lomonsova, Moscow, USSR

SO Zh. Strukt. Khim. (1967), 8(6), 1102-3

CODEN: ZSTKAI

DT Journal

LA Russian

AB **Dipole moments**, .mu., of some silylamines were

measured at 25.degree. in dil. C6H6 solns. (compd. and .mu. in D. given):
(Me3Si)3N, 0; (Me3Si)2NH, 0.41; (PrSiMe2)2NH, 0.37; (ClCH2SiMe2)2NH, 2.47;
(H2C:CHSiMe2)2NH, 0.35; (H2C:CHCH2SiMe2)2NH, 0.75; (PhSiMe2)2NH, 0.52; I,
X = Me, Y = N, n = 3, 0.65; I, X = Me, Y = NH, n = 2, 0.74; I, X = Et, Y =
NH, n = 2, 0.93; Me2PhSiMe2, 0.84; Me2SiNEt2, 0.33. The obtained values
of .mu. are discussed.

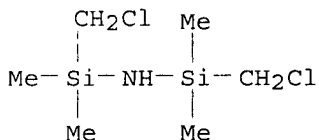
IT **14579-91-0**

RL: PRP (Properties)

(**dipole moment** of)

RN 14579-91-0 HCAPLUS

CN Silanamine, 1-(chloromethyl)-N-[(chloromethyl)dimethylsilyl]-1,1-dimethyl-
(9CI) (CA INDEX NAME)



L46 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:84615 HCAPLUS

DN 136:139888

TI Amphipathic coating for modulating cellular adhesion composition

IN Zamora, Paul O.; Osaki, Shigemasa; Tsang, Ray

PA Biosurface Engineering Technologies, Inc., USA

SO U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 399,119, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6342591	B1	20020129	US 2000-629059	20000731
	US 5955588	A	19990921	US 1998-159276	19980922
	EP 1159302	A1	20011205	EP 1999-901385	19990108
	R: DE, ES, FR, GB, IT, IE				
	WO 2002010221	A1	20020207	WO 2001-US24000	20010731
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1998-159276	A1	19980922		
	US 1999-399119	B2	19990920		
	US 1997-68374P	P	19971222		
	WO 1999-US450	W	19990108		
	US 2000-629059	A	20000731		

AB The present invention provides an anti-thrombogenic and cellular-adhesion coating compn. for blood-contacting surfaces. The coating comprises a **covalent** complex of 1-30 hydrophobic silyl moieties, directly bound to a heparin mol. via **covalent** bonding, with an adhesive mol. directly bound to the heparin mol. In one embodiment, the coating comprises benzyl-(1,2-dimethyl)disilylheparin, wherein an adhesive mol., such as fibronectin, is bound to the heparin. Benzylmagnesium chloride was treated serially with chloro(chloromethyl)dimethylsilane to give a benzyl-(1,2dimethyl)disilyl compd. This compd. was modified to form an activated succinimidyl ester that was, in turn, conjugated to heparin to form a benzyl-(1,2-dimethyl)disilylheparin. The silyl-heparin coating may be applied to any polymeric substrate, either forming a medical or other implantable device, or coated or otherwise forming a surface of a medical or other implantable device.

IT 1719-57-9

RL: RCT (Reactant); RACT (Reactant or reagent)

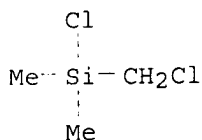
(amphipathic coating for modulating cellular adhesion compn.)

RN 1719-57-9 HCAPLUS

CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

07/29/2002

Serial No.:09/812,647

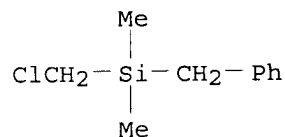


IT 5356-99-0P 392298-22-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(amphipathic coating for modulating cellular adhesion compn.)

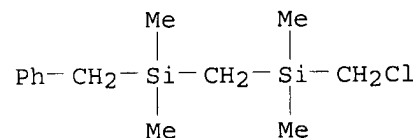
RN 5356-99-0 HCAPLUS

CN Silane, (chloromethyl)dimethyl(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 392298-22-5 HCAPLUS

CN Silane, (chloromethyl)[[dimethyl(phenylmethyl)silyl]methyl]dimethyl- (9CI)
(CA INDEX NAME)



RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:885415 HCAPLUS

DN 136:2509

TI Functionalized thiophene oligomers and their use as fluorescent markers

IN Cipriani, Franco; Gigli, Giuseppe; Cingolani, Roberto; Favaretto, Laura;
Zambianchi, Massimo; Sotgiu, Giovanna; Barbarella, Giovanna; Citro,
Gennaro

PA Consiglio Nazionale Delle Ricerche, Italy; Istituto Nazionale Per La
Fisica Della Materia; Bio-D S.R.L.

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

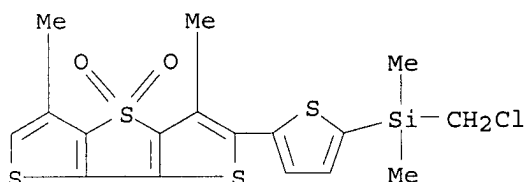
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1160246	A2	20011205	EP 2001-113236	20010530
	EP 1160246	A3	20020130		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 2002086437	A1	20020704	US 2001-871353	20010530
PRAI	IT 2000-BA20	A	20000531		

AB The invention concerns the synthesis of thiophene oligomers and their use as fluorescent markers in anal. techniques. The oligomers are excitable in the visible and UV region and have at least one functional group able to form a **covalent** bond with org. and/or biol. mols., so as not to alter either the fluorescence properties of the oligomers or the biol. activity of the bound mols.

IT **376393-45-2DP**, conjugates with albumin
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (functionalized thiophene oligomers and use as fluorescent markers)

RN 376393-45-2 HCAPLUS

CN Silane, (chloromethyl) [5-(3,5-dimethyl-4,4-dioxidodithieno[3,2-b:2',3'-d]thien-2-yl)-2-thienyl]dimethyl- (9CI) (CA INDEX NAME)



L46 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:415887 HCAPLUS

DN 135:227218

TI Syntheses of racemic and non-racemic silicon- and germanium-containing .alpha.-amino acids of the formula type H₂NCH(CH₂ElR₃)COOH (El=Si, Ge; R=organyl) and incorporation of D-H₂NCH(CH₂SiMe₃)COOH and D-H₂NCH(CH₂GeMe₃)COOH into biologically active decapeptides: a study on C/Si/Ge bioisosterism

AU Merget, Marcus; Gunther, Kurt; Bernd, Michael; Gunther, Eckhard; Tacke, Reinhold

CS Institut fur Anorganische Chemie, Universitat Wurzburg, Wurzburg, D-97074, Germany

SO Journal of Organometallic Chemistry (2001), 628(2), 183-194
 CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier Science S.A.

DT Journal

LA English

AB Two novel efficient methods for the synthesis of racemic silicon- and germanium-contg. .alpha.-amino acids of the formula type rac-H₂NCH(CH₂ElR₃)COOH (El = Si, Ge; R = organyl), starting from 3,6-diethoxy-2,5-dihydropyrazine, have been developed. Racemic .alpha.-amino acids synthesized: rac-H₂NCH(CH₂SiMe₃)COOH (rac-2), rac-H₂NCH(CH₂GeMe₃)COOH (rac-3), rac-H₂NCH(CH₂SiMe₂Ph)COOH (rac-4), rac-H₂NCH(CH₂GeMe₂Ph)COOH (rac-5), and rac-H₂NCH(CH₂SiMe₂CH:CH₂)COOH (rac-6). Preparative liq.-chromatog. resoln. of rac-2 and rac-3 [CHIROBIOTIC T (glycopeptide Teicoplanin **covalently** linked to spherical silica gel) as the stationary phase] yielded the .alpha.-amino acids (R)-2, (S)-2, (R)-3, and (S)-3. The (R)- and (S)-enantiomers of .beta.-(trimethylsilyl)alanine [(R)- and (S)-2] and .beta.-(trimethylgermyl)alanine [(R)- and (S)-3] are sila- and germa-analogs, resp., of the antipodes of the non-proteinogenic .alpha.-amino acid .beta.-tert-butylalanine [(S)- and (R)-H₂NCH(CH₂CMe₃)COOH; (S)- and (R)-1]. Starting from the N-Fmoc-protected C/Si/Ge-analogous (D-configuration) .alpha.-amino acids (R)-1, (S)-2, and (S)-3, the C/Si/Ge-analogous decapeptides 7-9 [Ac-D-Nal1-4-Cl-D-Phe2-D-Pal3-Ser4-N-Me-

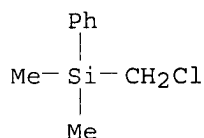
Tyr5-D-Hci6-Nle7-Arg8-Pro9-D-Me3El-Ala10-NH2 (7, El = C; 8, El = Si; 9, El = Ge)] were prepd. by sequential solid-phase synthesis. The decapeptides 7-9 were studied in vitro in a functional assay using a recombinant cell line expressing the human GnRH receptor (agonist Triptorelin). Compds. 7-9 behaved as medium-potent GnRH antagonists, the antagonistic potencies of these three C/Si/Ge analogs being very similar.

IT 1833-51-8 2344-80-1 16709-86-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. and resoln. of racemic silicon- and germanium-contg.
.alpha.-amino acids and prepn. of biol. active peptides contg. them)

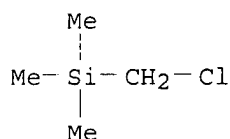
RN 1833-51-8 HCAPLUS

CN Silane, (chloromethyl)dimethylphenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



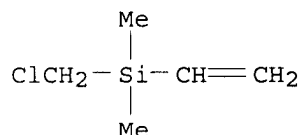
RN 2344-80-1 HCAPLUS

CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 16709-86-7 HCAPLUS

CN Silane, (chloromethyl)ethenyldimethyl- (9CI) (CA INDEX NAME)



RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:288479 HCAPLUS

DN 135:92671

TI Tautomeric Equilibrium between Penta- and Hexacoordinate Silicon Chelates.
A Chloride Bridge between Two Pentacoordinate Silicons

AU Kalikhman, Inna; Girshberg, Olga; Lameyer, Lutz; Stalke, Dietmar; Kost, Daniel

CS Department of Chemistry, Ben-Gurion University, Beer Sheva, 84105, Israel

SO Journal of the American Chemical Society (2001), 123(20), 4709-4716

CODEN: JACSAT; ISSN: 0002-7863

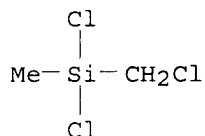
PB American Chemical Society

DT Journal

LA English
 OS CASREACT 135:92671
 AB The reaction of O-trimethylsilyl-1,1-dimethyl-2-trifluoroacetylhydrazine with chloromethyl(methyl)dichlorosilane affords an unexpected equil. mixt., 10a .dblarw. 11a, between a neutral hexacoordinate silicon chelate with a **covalent** chloro ligand (10a) and an ionic pentacoordinate silicon complex (11a). The equil. reaction consists formally of a migration of the **covalent** chloro ligand from silicon to an adjacent ammonium nitrogen, as a chloride anion, and thus constitutes a novel type of tautomeric reaction. Crystallog. and NMR data provide evidence for the reaction. Temp., solvent, substituent, and counterion effects on the tautomeric equil. are discussed: when the temp. of the mixt. is raised, the equil. ratio 10a/11a increases. Formation of the mixt. in toluene, a nonionizing solvent, shifts the equil. completely toward the neutral 10a. When the initial hydrazide has a Ph (11c) or a hydrogen (11b) group as substituent, rather than CF₃, the equil. is shifted to the ionic side. Replacement of the chloride counterion by triflate, using trimethylsilyl triflate, shifts the 10a/11a mixt. to the ionic side. Low-temp. NMR monitoring of the stepwise formation of 10/11 was carried out and provided insight into the reaction mechanism. In an attempt to grow crystals of 11c, the pentacoordinate tautomer analog, an unprecedented chloride-bridged disiloxane complex, with two pentacoordinate silicons sharing a common axial chloro ligand, crystd. and was characterized and described.

IT **1558-33-4**, Chloromethyl(methyl)dichlorosilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tautomeric equil. between penta- and hexacoordinate silicon chelates and prepn. of chloride bridge between two pentacoordinate silicons)

RN 1558-33-4 HCAPLUS
 CN Silane, dichloro(chloromethyl)methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:606986 HCAPLUS
 DN 131:229198
 TI Non-thrombogenic coating composition and methods for using same
 IN Tsang, Ray; Osaki, Shigemasa
 PA Innerdyne, Inc., USA
 SO U.S., 9 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5955588	A	19990921	US 1998-159276	19980922
	WO 2000040619	A1	20000713	WO 1999-US450	19990108
	W: JP				

07/29/2002

Serial No.:09/812,647

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE

EP 1159302 A1 20011205 EP 1999-901385 19990108

R: DE, ES, FR, GB, IT, IE

US 6342591 B1 20020129 US 2000-629059 20000731

PRAI US 1997-68374P P 19971222

US 1998-159276 A1 19980922

WO 1999-US450 W 19990108

US 1999-399119 B2 19990920

AB The present invention provides an anti-thrombogenic coating compn. for blood-contacting surfaces. The coating comprises a **covalent** complex of from 1 to 30 hydrophobic silyl moieties of R1(SiR22CH2)nOCOR3- wherein R1 is a C1-8 alkyl or C6-32 aryl group, each R2 is independently selected from C1-8 alkyl and C6-32 aryl, R3 is N or O, and n is a no. from 1 to 10, directly bound to a heparin mol. via **covalent** bonding. Bz(SiMe2 CH2)nOCO2N(COCH2)2 was prepd. and conjugated with heparin to give a non-thrombogenic coating material.

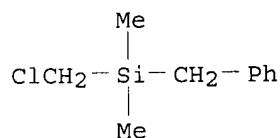
IT 5356-99-0P, Benzyl(chloromethyl)dimethylsilane
244017-73-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(non-thrombogenic coating compn. and methods for using same)

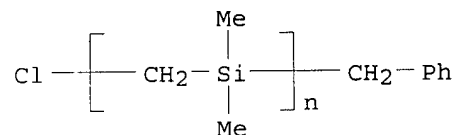
RN 5356-99-0 HCAPLUS

CN Silane, (chloromethyl)dimethyl(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 244017-73-0 HCAPLUS

CN Poly[(dimethylsilylene)methylene], .alpha.-(phenylmethyl)-.omega.-chloro- (9CI) (CA INDEX NAME)



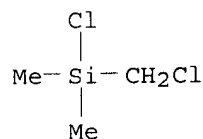
IT 1719-57-9, Chloro(chloromethyl)-dimethylsilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(non-thrombogenic coating compn. and methods for using same)

RN 1719-57-9 HCAPLUS

CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:457933 HCAPLUS

DN 131:88661

TI Dendrimer-based nanoscopic sponges and metal composites

IN Balogh, Lajos; Deleuze-Jallouli, Agrnes M.; Dvornic, Petar R.; Owen, Michael J.; Perz, Susan Victoria; Spindler, Ralph

PA Dow Corning Corporation, USA

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 928813	A1	19990714	EP 1999-100318	19990112
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5938934	A	19990817	US 1998-6573	19980113
	JP 11263837	A2	19990928	JP 1999-6781	19990113
PRAI	US 1998-6573		19980113		

AB The title compns. comprise (i) a metal cation, (ii) a metal salt, (iii) a metal oxide, (iv) an elemental metal, (v) a water-sol. org. mol., or (vi) a water sol. organometallic mol., adsorbed, absorbed or encapsulated in a dendrimer-based network having hydrophilic and hydrophobic nanoscopic domains, the dendrimer-based network comprising a crosslinked product of a radially layered copolydendrimer (e.g., PANAM) having a hydrophilic interior and a hydrophobic organosilicon exterior terminated with reactive end groups, the copolydendrimer being prep'd. by reacting a hydrophilic dendrimer having -NH₂ surface groups, with an organosilicon comp'd., in the presence of a solvent. The dendritic polymer based networks are capable of performing as nanoscopic sponges for electrophilic guest moieties. As a result, these networks yield nanoscopic organo-inorg. composites which contain organosilicon units as an integral part of their covalently bonded matrix.

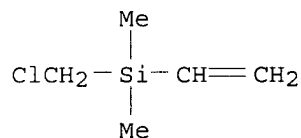
IT 16709-86-7DP, Chloromethyldimeth-ylvinylsilane, reaction products with dendrimers

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dendrimer-based nanoscopic sponges and metal composites)

RN 16709-86-7 HCAPLUS

CN Silane, (chloromethyl)ethenyldimethyl- (9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:161049 HCAPLUS

DN 128:180766

07/29/2002

Serial No.:09/812,647

TI Supported compounds for cocatalysts for metallocene catalysts for polymerization of olefins

IN Fritze, Cornelia; Kuber, Frank; Bohnen, Hans

PA Hoechst A.-G., Germany

SO Eur. Pat. Appl., 26 pp.

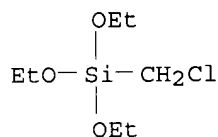
CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 824112	A1	19980218	EP 1997-113300	19970801
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	DE 19632557	A1	19980219	DE 1996-19632557	19960813
	DE 19632558	A1	19980219	DE 1996-19632558	19960813
	DE 19647070	A1	19980520	DE 1996-19647070	19961114
PRAI	DE 1996-19632557	A	19960813		
	DE 1996-19632558	A	19960813		
	DE 1996-19647070	A	19961114		
AB	Compds. of Group IIA, IIIA, IVA, and VA elements such as chlorobis(pentafluorophenyl)borane (I) covalently bonded to supports are useful as cocatalysts for polymn. olefins in the presence of metallocene catalysts to give polymers with good morphol. A typical supported compd. was manufd. by mixing 5 g silica with 50 mL pentane and 3.8 g I, and decanting.				
IT	15267-95-5, Chloromethyltriethoxysilane				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(cocatalyst precursor; supported compds. for cocatalysts for metallocene catalysts for polymn. of olefins)				
RN	15267-95-5 HCAPLUS				
CN	Silane, (chloromethyl)triethoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)				



L46 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:126428 HCAPLUS

DN 128:167821

TI Supported compounds for cocatalysts for metallocene catalysts in polymerization of olefins

IN Fritze, Cornelia; Kueber, Frank; Bohnen, Hans

PA Hoechst A.-G., Germany

SO Ger. Offen., 18 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19632558	A1	19980219	DE 1996-19632558	19960813
	EP 824112	A1	19980218	EP 1997-113300	19970801
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

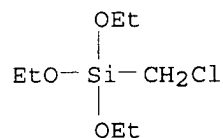
CA 2212668	AA	19980213	CA 1997-2212668	19970811
TW 408138	B	20001011	TW 1997-86111464	19970811
ZA 9707189	A	19980213	ZA 1997-7189	19970812
NO 9703707	A	19980216	NO 1997-3707	19970812
AU 9734133	A1	19980219	AU 1997-34133	19970812
CN 1182093	A	19980520	CN 1997-117378	19970812
US 6329313	B1	20011211	US 1997-907938	19970812
JP 10158269	A2	19980616	JP 1997-218716	19970813
BR 9704354	A	19990112	BR 1997-4354	19970813
PRAI DE 1996-19632557	A	19960813		
DE 1996-19632558	A	19960813		
DE 1996-19647070	A	19961114		

AB Compds. of Group IIA, IIIA, IVA, and VA elements such as chlorobis(pentafluorophenyl)borane (I) **covalently** bonded to supports are useful as cocatalysts for polymn. olefins in the presence of metallocene catalysts to give polymers with good morphol. A typical supported compd. was manufd. by mixing 5 g silica with 50 mL pentane and 3.8 g I, and decanting.

IT **15267-95-5**, Chloromethyltriethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cocatalyst precursor; supported compds. for cocatalysts for metallocene catalysts for polymn. of olefins)

RN 15267-95-5 HCAPLUS

CN Silane, (chloromethyl)triethoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



L46 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:379876 HCAPLUS

DN 125:40957

TI Chemically active ceramic compositions with a phospho-acid moiety

IN Tavlarides, Lawrence L.; Deorkar, Nandu

PA Syracuse University, USA

SO PCT Int. Appl., 59 pp.
 CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

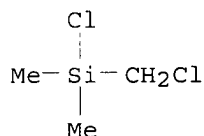
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9609984	A1	19960404	WO 1995-US12198	19950926
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5612275	A	19970318	US 1994-313019	19940927
	US 5690832	A	19971125	US 1997-788217	19970127
PRAI	US 1994-313019		19940927		

AB Novel composite materials useful for removing heavy metal ions from solns., such as aq. waste streams, comprise an inorg. ceramic support, such as silica gel, having terminal hydroxy groups, to the oxygen of which a ligand is **covalently** bonded through a silane coupling agent, the ligand being a phosphorous or thiophosphorous based acid moiety.

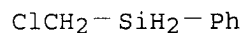
07/29/2002

Serial No.:09/812,647

IT 1719-57-9, Chloromethyldimethyl-chlorosilane
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(chem. active ceramic compns. with a phospho-acid moiety for removing
metals from wastewaters)
RN 1719-57-9 HCAPLUS
CN Silane, chloro(chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX
NAME)



L46 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:311197 HCAPLUS
DN 120:311197
TI Projection x-ray lithography with ultrathin imaging layers and selective
electroless metalization
AU Calvert, Jeffrey M.; Koloski, Tim S.; Dressick, Walter J.; Dulcey, Charles
S.; Peckerar, Martin C.; Cerrina Franco; Taylor, James Welch; Suh, Doowon;
Wood, O. R. II; et al.
CS Cent. Biomol. Sci. Eng., Nav. Res. Lab., Washington, DC, 20375-5348, USA
SO Opt. Eng. (Bellingham, Wash.) (1993), 32(10), 2437-45
CODEN: OPEGAR; ISSN: 0091-3286
DT Journal
LA English
AB Soft x-ray synchrotron radiation, of wavelength 14 nm, is used to pattern
self-assembled monolayer films, which are then selectively metalized using
electroless deposition. Organosilane precursors of the general type RSiX_3
(R = org. functional group; X = Cl, OCH₃) are used to form
covalently bound ultrathin films by mol. self-assembly on Si
wafers. These films are approx. one monolayer (approx. 1 nm) thick.
X-ray exposure is used to remove or transform the R groups in selected
areas of the film. The laterally patterned reactivity on the surface is
then used as a template for the additive deposition of a thin layer of
electroless nickel in the unexposed regions. The Ni metal layer can then
be used as a plasma etch mask for pattern transfer. Metal features with
linewidths .ltoreq.0.25 .mu.m are produced with exposure doses of 50
mJ/cm².
IT 42976-56-7
RL: USES (Uses)
(x-ray absorbance of self-assembled monolayer film, for lithog. with
ultrathin imaging layers and selective electroless metalization)
RN 42976-56-7 HCAPLUS
CN Silane, (chloromethyl)phenyl- (9CI) (CA INDEX NAME)

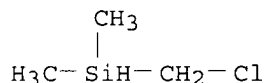


L46 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:651228 HCAPLUS
DN 119:251228
TI Quantitative analysis of branching in poly(ortho ester) networks

AU Shih, Chung; Waldron, Niki; Traugott, Cathy
 CS Merck Res. lab., INTERx Res. Corp., Lawrence, KS, 66047, USA
 SO J. Appl. Polym. Sci. (1993), 49(12), 2221-7
 CODEN: JAPNAB; ISSN: 0021-8995
 DT Journal
 LA English
 AB A direct method to quantify the branching attributable to fully reacted hexane-1,2,6-triol (I) in poly(ortho ester) networks is reported. The method was based on the presence of free OH groups on incompletely reacted I in the poly(ortho ester) matrix that were "tagged" prior to matrix hydrolysis. I mols. that were completely reacted, i.e., acting as crosslinker, within the polymer matrix would have no free OH groups available for "tagging" and posthydrolysis would be present as free I. Exptl., the matrix was swollen in p-dioxane, then Ph isocyanate (II) was added to "tag" the OH groups in the presence of a stannous octoate catalyst. After removal of excess II, the matrix was hydrolyzed under mild acidic conditions. Any "untagged" I was subsequently derivatized into trimethylsilyl ethers and analyzed by GC. The level of branching detd. by this direct chem. method correlated well with conventional swell ratio measurements. Furthermore, the extent of hydrolysis of the polymer backbone **covalent** bonds were also measured by this method since the resulting OH groups were "tagged" by II. All polyols were analyzed simultaneously by GC. Application of this method in characterization of the solid-state hydrolysis of a poly(ortho ester) network was demonstrated. The degrdn. profiles of the branch sites and other backbone ortho ester bonds showed that the hydrolysis was initially slow, becoming progressively rapid.

IT **3144-74-9D**, Chloromethyldimethylsilane, reaction products with Ph isocyanate-treated bis(ethylidene)tetraoxaspirodecane-hexanediol-hexanetriol copolymer and hexamethyldisilazane
 RL: PRP (Properties)
 (hydrolysis and degrdn. of, GC anal. of, in quant. anal. of chain branching)

RN 3144-74-9 HCAPLUS
 CN Silane, (chloromethyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L46 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2002 ACS
 AN 1981:481152 HCAPLUS
 DN 95:81152
 TI Synthesis and properties of **covalent** tri- and tetravalent vanadium

AU Razuvaev, G. A.; Latyaeva, V. N.; Vyshinskaya, L. I.; Drobotenko, V. V.
 CS Inst. Chem., Gorky, USSR
 SO J. Organomet. Chem. (1981), 208(2), 169-82
 CODEN: JORCAI; ISSN: 0022-328X
 DT Journal
 LA English
 AB Reactions of VCl₃.3 THF with RMgX (R = Ph, CH₂SiMe₃, C₆F₅) in various ratios were studied. The stable compds. R₃V.THF (R = CH₂SiMe₃, C₆F₅) were obtained. The chem. properties of R₃V.THF, R₄V.2 L (R = CH₂Ph, L = Et₂O; R = C₆F₅, L = THF) and (Me₃SiCH₂)₄V were investigated. Cleavage of the V-carbonium .sigma.-bond occurs in reactions with H₂O, HCl and HgCl₂. The

07/29/2002

Serial No.:09/812,647

insertion of CO into the V-C .sigma.-bond was investigated. A scheme for the derivs. of tri- and tetravalent V is proposed. Oxidative addn. of (C6F5)3V.THF by Ph3CCl and VCl3.3THF was also studied.

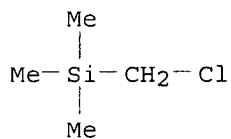
IT 2344-80-1

RL: RCT (Reactant)

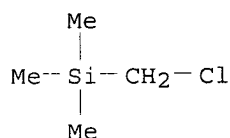
(Grignard reaction of, with trichlorotris(tetrahydrofuran)vanadium)

RN 2344-80-1 HCAPLUS

CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L49 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:328338 HCAPLUS
DN 129:54408
TI Interatomic interactions in ClCH₂M(CH₃)₃ molecules (M = C, Si) from ab initio calculations
AU Feshin, V. P.; Kon'shin, M. Yu.
CS Ural Division, Institute of Technical Chemistry, Russian Academy of Sciences, Perm, Russia
SO Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (1997), 67(11), 1733-1735
CODEN: RJGCEK; ISSN: 1070-3632
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
AB Ab initio calcns. of ClCH₂M(CH₃)₃ mols. (M = C, Si) by the RHF/6-31G*//RHF/6-31G* method show that the symmetry of electron distribution at their Cl atoms is practically axial, the unshared electron pairs of the Cl atom are not involved in conjugation with vacant d orbitals of the Si atom, and the Cl-C bond in the Cl-C-M group is polarized owing to the field effect produced by the charge on the M atom. The ³⁵Cl NQR frequencies in these mols. and the asymmetry parameters of the **elec. field** gradient on the ³⁵Cl nuclei, calcd. from the populations of less diffuse components of valence p orbitals of the Cl atoms, are in conformity with exptl. observations. The higher ³⁵Cl NQR frequency in the compd. with M = Si than with M = C is a result of lower electron d. of the 3p component of the p.sigma. orbital of the Cl atom in the former case.
IT **2344-80-1**, (Chloromethyl)trimethylsilane
RL: PRP (Properties)
(SCF calcn. of ³⁵Cl NQR frequencies of chlorodimethylpropane and (chloromethyl)trimethylsilane)
RN 2344-80-1 HCAPLUS
CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



07/29/2002

Serial No.:09/812,647

L49 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS

AN 1990:507827 HCAPLUS

DN 113:107827

TI The EFG asymmetry parameters at chlorine-35 nuclei and the electronic effects in chlorine-containing organic and complex compounds of Group IVA and VA elements

AU Feshin, V. P.; Voronkov, M. G.

CS Sib. Branch, Inst. Org. Chem., Irkutsk, 664033, USSR

SO Z. Naturforsch., A: Phys. Sci. (1990), 45(3-4), 213-18

CODEN: ZNASEI; ISSN: 0932-0784

DT Journal

LA English

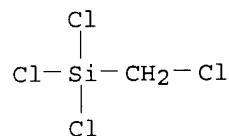
AB The ^{35}Cl NQR method and, in particular, the EFG asymmetry parameters at ^{35}Cl nuclei were used for the soln. of a no. of principal problems of theor. org. and organometallic chem., such as the mechanism of non-induction influence of the heteroatom M on the atom Y in the nonlinear Y-Z-M or Y-Z = M group, M-Cl bond multiplicity in planar mol. fragments and the asymmetry of halogen atom electron distribution in org. and organometallic mols. In tetrahedral mols. this distribution is nearly axially sym. for different M. This symmetry is also characteristic for axial chlorine atoms in trigonal-bipyramidal and octahedral mols., independently of M. The deviation of the electron distribution of equatorial chlorine atoms from axial symmetry in the two latter cases depends essentially upon M and does not depend much on the peculiarity of the formation of these polyhedra and the character and no. of substituents.

IT 1558-25-4 2344-80-1

RL: PRP (Properties)
(NQR of)

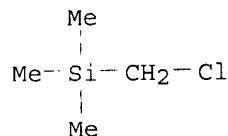
RN 1558-25-4 HCAPLUS

CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 2344-80-1 HCAPLUS

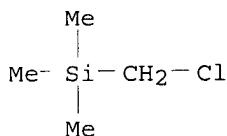
CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



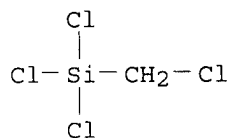
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Serial No.:09/812,647

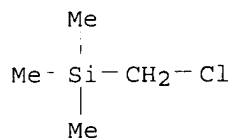
L49 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:585561 HCAPLUS
DN 93:185561
TI The quantitative estimation of the germinal interaction in organic and
metalloorganic molecules
AU Feshin, V. P.; Nikitin, P. A.; Voronkov, M. G.; Vitkovskaya, N. M.;
Kobychev, V. B.
CS Inst. Org. Chem., Irkutsk, 664033, USSR
SO Magn. Reson. Relat. Phenom., Proc. Congr. AMPERE, 20th (1979), Meeting
Date 1978, 484. Editor(s): Kundla, E.; Lippmaa, E.; Saluvere, T.
Publisher: Springer, Berlin, Fed. Rep. Ger.
CODEN: 43UDAE
DT Conference
LA English
AB The contribution of the through-space interaction of the geminal atoms, M
and H, to the electron d. of the C-Cl bond and to the ³⁵Cl NQR frequency
of RCH₂Cl (R = H, OH, OMe, SMe, NMe₂, SiMe₃) are calcd. The calcns. are
compared with CNDO/2 calcns. and the exptl. data.
IT **2344-80-1**
RL: PRP (Properties)
(chlorine-35 NQR of, field effects in relation to)
RN 2344-80-1 HCAPLUS
CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



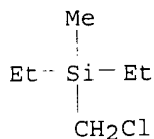
L49 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:610713 HCAPLUS
DN 91:210713
TI Mechanism of the interaction of the atoms of Y and M in molecules
containing geminal Y and M groups
AU Feshin, V. P.; Sapozhnikov, Yu. E.; Dolgushin, G. V.; Yasman, Ya. B.;
Voronkov, M. G.
CS Irkutsk. Inst. Org. Khim., Irkutsk, USSR
SO Dokl. Akad. Nauk SSSR (1979), 247(1), 158-60 [Phys. Chem.]
CODEN: DANKAS; ISSN: 0002-3264
DT Journal
LA Russian
AB The asymmetry parameters (.eta.) of the **elec. field**
gradient at Cl in ClCH₂OPr, MeCHClOPr, ClCH₂SiMe₃, ClCH₂SiCl₃,
MeCHClSiCl₃, and 1-(chloromethyl)silatane were zero or very small. This
indicated that the electrons of the C-Cl bond interacted with the O or Si
atoms.
IT **1558-25-4 2344-80-1**
RL: PRP (Properties)
(asym. parameter for **elec. field** gradient at
chlorine in, geminal interaction in relation to)
RN 1558-25-4 HCAPLUS
CN Silane, trichloro(chloromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



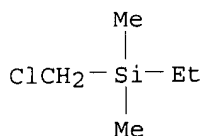
RN 2344-80-1 HCAPLUS
CN Silane, (chloromethyl)trimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L49 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1968:472660 HCAPLUS
 DN 69:72660
 TI Proton magnetic resonance spectra of methyl and ethyl derivatives of silicon and germanium, and the d(sub .pi.)-p(sub .pi.)-interaction
 AU Egorochkin, A. N.; Burov, A. I.; Mironov, V. F.; Gar, T. K.; Vyazankin, N. S.
 CS Lab. Stabil. Polim., Gorki, USSR
 SO Dokl. Akad. Nauk SSSR (1968), 180(4), 861-4
 CODEN: DANKAS
 DT Journal
 LA Russian
 AB To obtain some information about d.pi.-p.pi. interactions in silanes and germanes of type MenGeX4-n (I), EtnGeX4-n (II), and EtnSiX4-n (III), a comparison of exptl. spectra and approx. calcn. of polar and magnetic effects in N.M.R. spectra is given. Two types of substituents were studied: for X = H, Me, Et, Pr, -(CH2)3OH, -CH(Me)OH, -(CH2)2COMe, -(CH2)3Cl, -CH2I, -CH2Cl, -CH(Me)SCN, -CH2NEt2 (n = 2 or 3) in I, and similar substituents in II and III, the chem. shifts were detd. by induction effect; for X = Cl, the magnetic effects and d.pi. - p.pi. interactions are also substantial. From the magnetic effects, the contribution of magnetic anisotropy of Si-Cl and Ge-Cl bonds was calcd. according to formula $\Delta\tau_{an} = \Delta\tau / 3N < (1 - 3\cos^2\theta) / R^3 >$, $\Delta\tau$ is the anisotropy of molar magnetic susceptibility of bonds Si-Cl or Ge-Cl, θ is angle between the symmetryaxes of bonds and radius vector R directed from dipole centrum to shieldedprotons. The contribution of **elec. field** of Si-Cl and Ge-Cl bonds was calcd. according to the formula $\Delta\tau_{e\tau} = -3.10 \cdot 10^{-12} E_z - 1.05 \cdot 10^{-18} E_z^2$, E_z being the component of **elec. field** E in direction of C-Hbond. Contribution $\Delta\tau = \tau_{exp} - \tau_{ealcd.}$, related to the d.pi.-p.pi. interactions of nonbonded Cl electrons with d-orbitals of Si or Ge, was 0.17 for I (n = 3), and 0.21 ppm. for Me3SiCl. A correlation of τ_{CH3} and τ_{CH2} with Hammett substituent const. sum is also given.
 IT 2943-81-9 3121-77-5
 RL: PRP (Properties)
 (nuclear magnetic resonance of, electronic effects in relation to)
 RN 2943-81-9 HCAPLUS
 CN Silane, (chloromethyl)diethylmethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

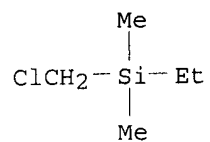


RN 3121-77-5 HCAPLUS
 CN Silane, (chloromethyl)ethyldimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

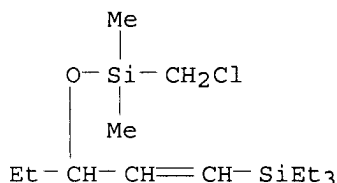


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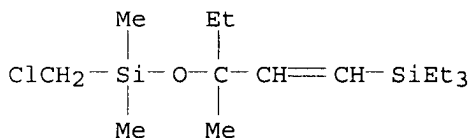
Serial No.:09/812,647



L50 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
 AN 1976:487118 HCAPLUS
 DN 85:87118
 TI Pharmacological properties of a series of unsaturated
 chloromethyldimethylsilane derivatives
 AU Karaev, S. F.; Abbasova, G. A.; Klygul, T. A.; Karaeva, K. F.; Vikhlyaev,
 Yu. I.; Shikhiev, I. A.
 CS Azerb. Inst. Nefti Khim. im. Azizbekova, Baku, USSR
 SO Azerb. Med. Zh. (1976), 53(1), 76-9
 CODEN: AZMZA6
 DT Journal
 LA Russian
 AB All 7 of the unsatd. chloromethyldimethylsilane derivs. tested i.p. in
 mice prolonged hexenal sleeping time by 50% at 30-50 mg/kg. At doses 2-5
 times higher they antagonized the convulsive effects of corazole. At
 100-600 mg/kg they disturbed **motor** coordination and the
 orientation reaction. In most cases toxic doses were .gtoreq.1000 mg/kg.
 Some relations between structure and pharmacol. activity were discussed.
 IT 54599-77-8 54599-78-9 54599-83-6
 54599-85-8 57292-86-1 57292-87-2
 60394-87-8
 RL: BAC (Biological activity or effector, except adverse); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (pharmacol. of)
 RN 54599-77-8 HCAPLUS
 CN Silane, [3-[[[(chloromethyl)dimethylsilyl]oxy]-1-pentenyl]triethyl- (9CI)
 (CA INDEX NAME)



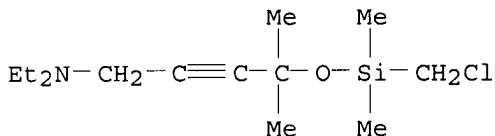
RN 54599-78-9 HCAPLUS
 CN Silane, [3-[[[(chloromethyl)dimethylsilyl]oxy]-3-methyl-1-pentenyl]triethyl-
 (9CI) (CA INDEX NAME)



RN 54599-83-6 HCAPLUS
 CN 2-Pentyn-1-amine, 4-[[[(chloromethyl)dimethylsilyl]oxy]-N,N-diethyl-4-
 methyl- (9CI) (CA INDEX NAME)

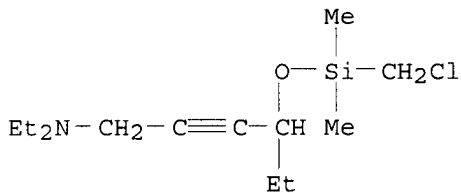
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Serial No.:09/812,647



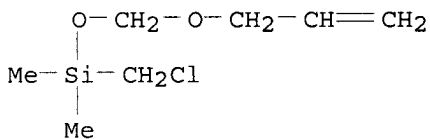
RN 54599-85-8 HCAPLUS

CN 2-Hexyn-1-amine, 4-[[(chloromethyl)dimethylsilyl]oxy]-N,N-diethyl- (9CI)
(CA INDEX NAME)



RN 57292-86-1 HCAPLUS

CN Silane, (chloromethyl)dimethyl[(2-propenyloxy)methoxy]- (9CI) (CA INDEX NAME)



RN 57292-87-2 HCAPLUS

CN Silane, (chloromethyl)dimethyl[(2-propynyloxy)methoxy]- (9CI) (CA INDEX NAME)

